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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,064	09/21/2001	Gregory Robert Roelofs	US 018156	4365

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EXAMINER

BRIER, JEFFERY A

ART UNIT PAPER NUMBER

2628

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/960,064

Applicant(s)

ROELOFS, GREGORY ROBERT

Examiner

Jeffery A. Brier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed on 2/20/2006 has been entered.

### ***Response to Arguments***

2. The amendments to claims 1 and 10 overcomes some of the 112 second paragraph issues, at least one of, set forth in the office action mailed on 11/22/2005, but introduces a new 112 second paragraph issue that is addressed below.

Applicant's arguments filed 11/22/2005 concerning claims 4-6 and 13-15 have been fully considered but they are not persuasive. The gravity well model and the force density model are described much more briefly than the spring force model and they are not described to use the coverage of a set of pixels. The gravity well model appears to be based upon the distance the glyph has entered a pixel rather than its coverage. At page 7 line 5 "a maximum force being applied when the glyph is half way into the gravity well." is written which clearly is using distance rather than area. The force density model appears to be based upon the distance the glyph has entered a pixel rather than its coverage. At page 7 lines 12-20 the distance of the glyph's center of mass is from the pixel's center is discussed which clearly is using distance rather than area.

Applicant did not discuss the rejection of claims 7 and 16, thus, the 112 second paragraph and first paragraph rejections of these claims are maintained.

Applicant did not discuss the rejection of claims 9 and 18, however, since the rejection of these claims made reference to claims 4 and 13, then the above discussion of claims 4 and 13 applies to claims 9 and 18.

Applicant did not discuss the rejection of claims 1 and 10 other than making a brief reference to the amendments.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7, 9-16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 10:

The force modeler step and the wherein clause do not mesh together well since the force modeler step models forces in dependence upon a placement of the glyph and the wherein clause modifies the force modeler step to model forces based on one of force-density model, spring model, or a gravity well model. Claims 1 and 10 are claiming force modeler determines forces based upon one of the three listed force models and apparently claims the force modeler selects one of the force models to determine the force. It is not clear if the placement is still in effect in view of the wherein clause and since the specification describes a force modeler that is based on spring model at page 6 lines 19-31, a force modeler that is based on gravity well at page 7 lines 1-5, and a force modeler that is based on force density at page 7 lines 12-20. Please rewrite the force modeler step to clearly claim one of the three force models, (force-density model, spring model, and a gravity well model).

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Claims 4, 5, 6, 13, 14, and 15:

These claims claim determining the forces that are applied to the glyph based upon an amount of coverage of a set of pixels of an array of pixels which is described by the specification for the spring force model, see page 6 lines 20-31, but is not described by the specification for the force-density model and gravity well model. Thus, with regard to force-density model and gravity well model this claim incorrectly adds to claim 1 or claim 10 limitations that do not apply to the claimed force-density model and gravity well model.

Claims 7 and 16:

Applicants specification at page 9 line 11 to page 10 line 5 describes only applying spring force model between glyphs, thus, force model used to apply forces to character, words, lines or documents are from the same type of force modeler. Therefore applicant needs to ensure the amended claims do not mix the force models for character, word, line, or document. Additionally for this claim applicant needs to ensure this claim is not being applied to the force-density and gravity well force modeler since only the spring model and non-linear force model is discussed by the specification as having inter-glyph spring force or non-linear force in the total force computed by the spring force modeler.

Claims 9 and 18:

The discussion of claims 4 and 13 apply here also.

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5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-7, 9-16, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For the reasons given above the specification does not enable one of ordinary skill in the art to make the invention having the force modeler select one of the three force-density model, spring model, and gravity well model to determine the force applied to the glyph. The specification enables using one of the three force models (force-density model, spring model, and gravity well model) to determine the force applied to the glyph and to the glyphs forming a document's characters.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. In view of the amendment made to claims 1 and 10 in order to clarify the claimed invention in response to the 112 second paragraph rejection it is clearer that the claims

are directed to non-statutory subject matter. A force modeler that selects one of the three listed force models and coupled to the glyph positioner does not claim a useful, concrete, and tangible result. Refer to the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility published on the USPTO website on October 26, 2005,

[http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101\\_20051026.p  
df](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf)

and published in the OG 22Nov2005

<http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>).

9. Claims 1-7, 9-16, and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. This claims are not directed to a useful, concrete, and tangible result. A force modeler that selects one of the three listed force models and coupled to the glyph positioner does not claim a useful, concrete, and tangible result. Even claims 3 and 13 do not claim a useful, concrete, and tangible result because the display device and the printer are not claimed to display or print the glyph since the term render is a broad term that includes display processing for the display device or printer processing for the printer that does not actually display or print the glyph. Applicant's specification in the background at page 1 lines 8-11 establishes the difference between rendering the glyph and displaying or printing the glyph. Thus, these claims are directed to abstract processing. *State Street Bank & Trust Co. v. Signature Financial Group Inc.* (CA FC) 47 USPQ2d 1596, 1603 (7/23/1998). AT&T

Corp. v. Excel Communications Inc. (CA FC) 50 USPQ2d 1447. On page 1603 first paragraph the CAFC wrote in State Street:

Under *Benson*, this may have been a sufficient indicium of nonstatutory subject matter. However, after *Diehr* and *Alappat*, the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it nonstatutory subject matter, unless, of course, its operation does not produce a "useful, concrete and tangible result." *Alappat*, 33 F.3d at 1544, 31 USPQ2d at 1557. 7

On page 1603 paragraph labeled [4] the CAFC wrote:

[4] The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter-- but rather on the essential characteristics of the subject matter, in particular, its practical utility. Section 101 specifies that statutory subject matter must also satisfy the other "conditions and requirements" of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice. See *In re Warmerdam*, 33 F.3d 1354, 1359, 31 USPQ2d 1754, 1757-58 (Fed. Cir. 1994).

10. Any amendments made to the claims need to take into account the four articles cited in the office action mailed on 11/22/2005 and discussed below which would teach an unduly broad force model claim, even ones limited to spring model, gravity model, and force-density model. Currently in view of the fact the claimed force modeler is selecting from the three listed force models these references cannot be used individually to reject the claims but if the claims are amended to be directed to only one force model then these references will have to be compared to the claims.



Matthew O. Ward and David Keim, Screen Layout Methods for Multidimensional Visualization, 1997, Euro-American Workshop on Visualization of Information and Data, 1997, pages 1 and 2. This article discusses applying spring model between clusters of glyphs and while encouraging bounding within clusters. See the paragraph spanning pages 1 and 2. If claims 1-7, 9-16, and 18 were amended to be limited to the spring model then this reference would teach the amended claims.

Jason E. Lewis and Alex Weyers, ActiveText: A Method for Creating Dynamic and Interactive Texts, 1999, Proceedings of the 12th annual ACM symposium on User interface software and technology, pgs 131-140. This article teaches with regard to figure 5 using gravity to position glyphs. If claims 1-7, 9-16, and 18 were amended to be limited to broadly claim gravity model then this reference would teach the amended claims. The reference teaches gravity model but is not clear about gravity well model. However, it would appear from applicants specification that gravity model and gravity well model are the same, see page 7 lines 1-5, since a pixel with gravity is pulling on an object having mass and the object with mass is pulling on the pixel having gravity.

PAK-KEUNG LAI, DIT-YAN YEUNG, and MAN-CHI PONG, A Heuristic Search Approach to Chinese Glyph Generation Using Hierarchical Character Composition, 1997, COMPUTER PROCESSING OF ORIENTAL LANGUAGES VOL.10, NO.3. 1996, pages 307-323. This reference teaches center of gravity and density range models for

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glyph positioning. The density range model is relevant to the claimed force-density model

PAK-KEUNG LAI, DIT-YAN YEUNG, and MAN-CHI PONG, Chinese Glyph Generation by Heuristic Search, June 1996, Technical report HKUST-CS96-17, Hong Kong University of Science and Technology, pages 1-21.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

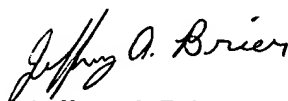
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (571) 272-

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7656. The examiner can normally be reached on M-F from 7:00 to 3:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (571) 272-7664. The fax phone Number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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